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**In Search of “Real” Migrants: The Effects of County
Level Factors on Enrollment in the Migrant Education
Program in Kentucky**

Thomas Hatton

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Executive Summary

Migrant laborers and their families have historically faced, and continue to face, major barriers in their education. The migrant population is, according to Dr. Michael Romanowski, “the most undereducated major subgroup in the United States” (Romanowski, 2003). The lack of educational attainment among migrant families can be attributed to numerous factors: above all, the disruptive migratory lifestyle of seasonal agricultural workers (Rosenthal & Banz-Spall, 2003), but also to socioeconomic burdens, mental and physical health issues, and more recently, linguistic and cultural barriers.

The Migrant Education Program is a supplemental federal program that was created under Title 1 Part C of the Elementary and Secondary Education Act to remediate the negative effects of the migratory lifestyle and to allow educational opportunities to migrant workers and their children (U.S. Department of Education, 2004). A migrant is identified as a family or individual who has completed a move seeking work in agriculture. While this definition has

In the early 00s, the Office of Migrant Education conducted nationwide assessments of enrollment practices and found that many school districts were using extremely loose definitions for Migrant Education Program participants. As a result, numerous programs decreased considerably in size nationwide, and enrollment overall decreased by about a third. In Kentucky, this significant change in student enrollment was coupled with changes in agriculture, demographics of migrant workers, and an increase in the use of the H2A Program.

While most research on migrants has investigated the problems that migrant students face inside and outside of the classroom, virtually no analysis has been done on the local factors that influence enrollment. This paper analyzes local agricultural factors in Kentucky following the policy change in the early 00s, to see if the policy changes made for a more predictive growth in areas where there is a need for labor intensive agriculture.

Introduction

The seasonal nature of agriculture has, throughout the United States, produced a labor market of nonlocal, seasonal migrants who travel from one area to another to fill the local need for temporary work. Migrant agricultural workers face considerable barriers as a result of their migratory lifestyle. Farmworkers often work in dangerous conditions. The International Labour Organization reported that agriculture is one of the top 3 most dangerous fields on average, with nearly 170,000 deaths each year due to pesticides, agricultural machinery, and sun exposure (International Labour Organization, 2009). Families and children of these laborers have long been subjected to the disorienting effects of the migrant lifestyle. Migrant families often are subjected to dangerous living conditions and health risks, and deal with isolation and cultural barriers as a result of their constant moves (Romanowski, 2003). The Migrant Education Program was created in 1965 under the Elementary and Secondary Education Act as a way to provide resources and continuity of education to students who travel with their parents, or young people who are school age but travel by themselves.

The Migrant Education Program has been administered in numerous Kentucky school districts for decades, and most migrants have historically qualified through tobacco work. Tobacco, a labor intensive, multi-seasonal crop, was Kentucky's primary agricultural export for most of the 20th century (Strupp, 2014). In 1999, Kentucky had the 11th largest program in the nation (Department of Education, 2002). However, the Migrant Education Program has reduced in size considerably due to a number of factors. One of the largest contributors to a decrease in enrollment was a policy change that occurred in the early '00s that restricted the enrollment criteria for program participants, in order to more accurately pinpoint whether or not a student is

truly a migrant. There are several other factors that have influenced enrollment, among them a transforming agricultural landscape following the implementation of the Tobacco Buyout Program in the early '00s, and a rise in the use of H2A workers in Kentucky. As a result, the program has become considerably smaller since the late '90s and has had to adapt to smaller funding levels. There is a large body of research on problems that migrant students face, and a smaller but significant share of research on methods to help migrant students, but research on factors that affect program enrollment is scarce. Enrollment in the Migrant Education Program has faced an overall nationwide decline since 2000, with dramatic decreases in some states (such as Kentucky).

While the program had historically identified and enrolled students using very loose criteria for what constitutes a "migrant", current program guidelines should follow a more predictive pattern based on supply and demand and local labor scarcity. My paper will contextualize the problems migrant students face, explain the Migrant Education Program and its purpose, and analyze on a county level the factors that have influenced enrollment following the more restrictive guidelines that were implemented in 2003, with the goal of seeing whether or not migrant students are being identified correctly and provided the help that they need.

Problem Definition

Migrant farmworkers are one of the most disenfranchised groups in the United States. Migrant farmworkers, according to the United States Department of Education, are workers who have moved from one county or state to another seeking agricultural labor (Department of Education, 2004). Migrant farmworkers often travel with their children, therefore exposing them

to the difficult circumstances inherent in the transient migratory lifestyle of a seasonal farmworker.

Roger Rosenthal and Banz-Spall (2003) researched why there is still a need for migrant labor in the 21st century. Although technology has dramatically increased yield and decreased the need for manual labor, many crops still require the use of human labor as means of production and harvest. There is, as a result, a consistent labor demand for migrant laborers. They often travel very long distances to work in extremely low-paying jobs and endure substandard and dangerous working and living conditions. Migrant laborers “have been called the poorest of the working poor (Rosenthal & Banz-Spall, 2003), not only because of their low wages, but also due to the negative effects of their transient lifestyle, the physical/mental health risks involved in migrant labor and poverty, and the cultural and linguistic barriers they often face as immigrants.

Literature Review

Migrant students face a unique set of challenges and barriers, among them educational disruption, poverty, and isolation. Michael Romanowski completed a thorough assessment of the many problems of migrant families as they relate to education. He points out that the migratory lifestyle is the biggest challenge for migrant students (Romanowski, 2003). He clarifies that that “more than two-thirds of our nation's migrant households and roughly 75 per-cent of migrant children live below the national poverty line” (Romanowski, 2003). He further states that, on average, up to two weeks of instructional time can be lost in these moves. Furthermore, the differing graduation requirements and the disorienting social effects of constantly having to

reestablish a home can result in major disruptions in migrant students' educational progress.

"The migrant population is the most undereducated major subgroup in the United States. The high school dropout rate of the children of migrant farm workers is 43 percent, higher than any other group in the United States" (Romanowski, 2003). He further states that, among migrants, 70 percent of adults never complete high school, and 75 percent are functionally illiterate.

Migrant students typically experience consistent educational disruption. Constant moves are extremely disruptive, but many migrant families view these relocations as a necessity. Kim Larson (1993) contextualized the need for migrant labor in the American economy, stating in the article that farmworkers function in local labor markets as temporary laborers, but only do so during peak periods of agriculture. The work they perform is intense, but it is of short duration and insufficient to support a permanent year-round workforce. Farmworkers must move frequently in order to stay employed (Larson, 1993). Migrant laborers often move at great personal cost, and arrive in new places with very few personal belongings or connections to society. Larsen explains that "migrant farmworkers move an average of eleven to thirteen times a year to find work (Larson, 1993)."

Almost all migrant families live in severe poverty, due to the low wages provided for migrant labor and the lack of education among migrant adults. This is "in spite of the fact that every able bodied member of the family, young and old, works (Dever, 1991)." Many researchers attribute this to two major factors: the absence of labor laws that protect migrant laborers and the fact many workers are undocumented, and therefore, worried about their legal status (Martin, Morales, & Theodore, 2007). Certain states have standard income requirements for migrant laborers and basic rights. However, a report on contracted laborers by the National Employment Law Project found that farmers obtain laborers through contractors that find daily

teams, in order to abdicate responsibility for injury and legal liability, as well as skirt wage and laws involving workers' rights. Because contractors find anonymous teams, the farmer abdicates responsibility for those hired to his labor contractors, who may be undocumented (Ruckelshaus and Goldstein, 2002). Socioeconomic disadvantages are at the core of the migrant conundrum, as they are compelled by their lack of education and job experience to stay in agriculture. Studies have shown that, due to the lack of educational opportunities provided to migrant youth due to their impermanence within school districts, and the strong pull of a culture that values agricultural work, many children of migrant workers continue to work the fields, despite the opportunities provided to them (Trotter 1992).

Migrant health is an area of much concern for the medical community. Migrant families are often exposed to "poor sanitary conditions, accidents, chronic exposure to health hazards, poor nutrition, harmful chemicals, and hazardous substances and circumstances (Tan, Ray, and Rodney, 1991)." In other research, it was found that 64% of migrant workers "are not guaranteed fresh drinking water, hand washing or toilet facilities in the fields (Helsinki Commission, 1993)." Migrant farmworkers have "the highest infectious disease rate in the United States, a staggering rate of tuberculosis infection, high rate of chronic diseases, and a risk for HIV that is ten times the national average (Dever, 1991)."

Several researchers have spoken about the difficulties of linguistic barriers among migrants. Nine out of ten migrant families enrolled in 2010 were of Hispanic origin. 34% of migrant children are also enrolled in an in-school English remediation program like ELL (Lundy-Ponce, 2010). This may seem like a small number for migrant families, but most of migrant children, despite the hardships they have faced, have learned to speak at least a level of

functional English. However, the majority of migrant parents speak a language other than English in the home (Rosenthal & Banz-Spall, 2003).

There are also cultural barriers that impede migrant students. Researchers Prewitt-Diaz, Trotter, and Rivera (1990) have proposed that there is a distinct migrant culture, complete with “common beliefs, values, norms, customs, and ways of seeing and understanding the world”. These values center primarily around hard work and familial loyalty, but can play out, as the researchers indicate, in situations in which a migrant student is forced to pick between going to school and working in the fields. Also, the differing realities of both the home and the school make it hard for migrant students to “choose a side”. They point out that this often plays out linguistically, Bilingual migrant children are constantly code switching between two worlds that lack comprehension of the other: the academic English that is taught in school and the spoken language of the home.

The Migrant Education Program

In 1965, an immense educational reform took place. Called the Elementary and Secondary Education Act (also known as Title 1- Improving the Academic Achievement of the Disadvantaged), the legislation aimed to assist disadvantaged groups with their education. Title 1 states that its purpose is “to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education (Department of Education, 1965).” The Migrant Education Program was formed under Title 1, Part C as a way to assist students who frequently move due to migratory seasonal or temporary labor. Since its passage, the Department of Education has

allocated additional funds to school districts to remediate the negative effects of moves due to seeking agricultural labor.

A migrant student is currently defined in under Title 1 Part C as “a child who is, or whose parent or spouse is, a migratory agricultural worker, including a migratory dairy worker, or a migratory fisher, and who, in the preceding 36 months, in order to obtain, or accompany such parent or spouse, in order to obtain, temporary or seasonal employment in agricultural or fishing work (Department of Education, 2006).” Kentucky, since the passage of Title 1, has received additional funding each year to support migrant students. Throughout the state, many school districts have utilized Title 1 funds to hire school staff whose responsibilities are specifically catered to the unique educational needs of migrant children in school. The most frequently hired migrant positions are migrant advocates, recruiters, and tutors. Migrant advocates act as case managers for migrant families and seek to remove academic and social barriers for migrant students. Migrant recruiters are hired to identify and recruit migrant families and determine their eligibility. Lastly, migrant tutors are hired within schools to help students with their academic needs (Department of Education, 2002).

Changes in the Migrant Education Program

Over the last 10 years, a number of factors have transformed the Migrant Education Program considerably. In just a decade, the program went from being a statewide, highly funded program that served mostly Caucasian students to a small, underfunded program that serves mostly Hispanic students and families. In a report conducted by the Office of Elementary and Secondary Education (OESE) in for the 1998-1999 school year, Kentucky was shown to have the

11th largest program in the country, with 25, 146 students identified as migrants. Of those students, 83% were reported as Caucasian, and only 11.6% were listed as Hispanic (Department of Education, 2002). For the 2013-2014 school year, there were 4,026 students that qualified as migrant in Kentucky, with nearly 80% of those students reporting as Hispanic.

The significant and rapid decrease in state and local funding caused by a decline in eligible students, as well as the demographic shift from Caucasian to Hispanic, has significantly changed the way migrant students are served in Kentucky. The decline of enrollment can largely be attributed to several factors. First, stricter eligibility requirements for students were put in place in the early '00s, as a result of governmental scrutiny and allegations of fraud in various states. Another major contributor to the transformation of the Migrant Education Program was the tobacco buyout program in Kentucky, in which large tobacco companies bought out thousands of acres tobacco farms, which significantly reduced the amount of movement and work in agriculture. Finally, the H-2A Visa for temporary agricultural workers in Kentucky has increased in usage, as farmers are seeking for ways to have a secure labor pool and comply with immigration laws. The increase in H-2A workers is a legal alternative to transitory nonlocal labor, although the effect has not yet been measured.

Demographic Changes

Migrant labor has traditionally formed an important part of the Kentucky economy. Migrant farm work has been a part of Kentucky agriculture for many years, and farm labor was typically done by white, native Kentuckians who traveled from county to county seeking agricultural labor. As tobacco was a crop that formed part of the state's agricultural legacy, it

was commonplace for families to work in tobacco in their area and in surrounding counties. However, the definition of “migrant” was interpreted much more loosely in that time, as families could qualify for the program without an intention to seek work in the area (on the condition that they had worked in tobacco since arrival). Therefore, most qualifying migrant children in Kentucky’s Migrant Education program were also identified as ‘white’, an anomaly in the Migrant Education Program nationwide, and the Kentucky “migrant” fit a different profile than the migrant students who were qualifying in states where labor streams and seasonal, state-to-state movement are more frequent occurrences. A comprehensive review of the Migrant Education Program, conducted by the Department of Education in 2006 pointed out that “unlike the nation, Kentucky’s migrant student population is largely (70 percent) white (Department of Education, 2006).”

A study conducted by the Kentucky Center for Economic Policy revealed that since 2000, there has been a 70% increase in the number of immigrants in Kentucky, a third of which are Hispanic. They further reported that there is a significant representation of immigrants who engage in farm work (Baumann, 2014). U.S.-born farmworkers and immigrants who had obtained immigrant status began to take better paying jobs in the ‘90s, as the United States experienced economic growth and stability, thus creating a need for a new labor source (Marton, Jackson-Smith, 2013). In Kentucky, the labor demographic for farm work has shifted considerably, as Hispanic farmworkers comprise the majority.

By extension, the Migrant Education Program in Kentucky has faced numerous changes as a result of the demographic shift. As most of the migrant students statewide were formerly White, many monolingual school staff handled the responsibilities of helping migrant students without linguistic or cultural barriers. The significant demographic shift from White to Hispanic

has caused problems in some local districts in which a naturalized, bilingual population is scarce. Traditionally, migrant advocates have been certified teachers. Some school districts have hired bilingual recruiters, advocates, and tutors, many of whom are not certified teachers but are hired for their bilingual abilities. Many school districts in Kentucky have had to hire contracted interpreters, expending already scarce resources to communicate with families. While the Migrant Education Program has typically been mostly academically focused, the increase in Hispanic families in Kentucky has brought cultural and linguistic barriers that have prompted local programs to add more culturally specific services, such as English classes or brochures on the differences between school systems in Latin America and the United States.

Eligibility Restrictions

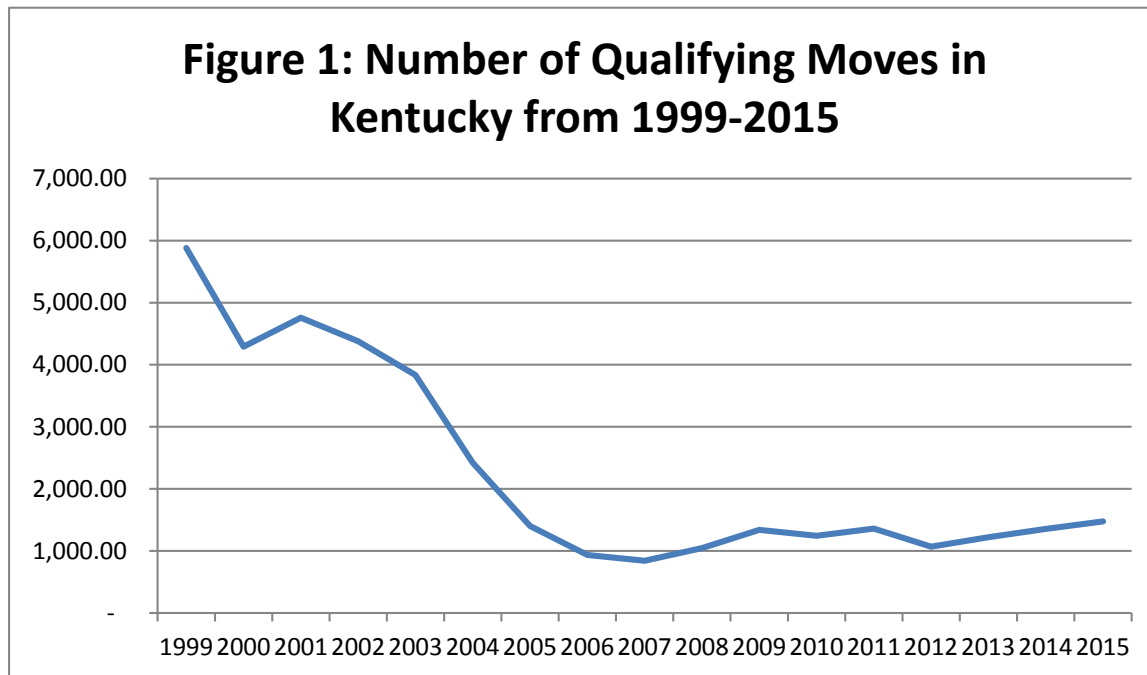
A student is qualified as a migrant if he/she moves individually or with a working family member to seek agricultural labor. In order to qualify, they must cross school district, county, state, or country lines seeking either temporary or seasonal work in agriculture. The majority of students who qualify do so as a result of their parents work, but there is a population of out-of-school youth that has grown in recent years. An agricultural activity is considered any activity in which raw agricultural products are handled. This includes planting or picking field crops, fruit and vegetable washing and packing, poultry processing, cow milking, and a number of other activities that involve the production of agricultural products (Kentucky State Guidelines for Identification and Recruitment, Eligibility, 2010). To qualify participants, the move must have been completed within the last 3 years, and once eligibility is confirmed, the arrival date of the

family to seek work becomes the qualifying arrival date (or QAD), and services are provided for 3 years from the qualifying arrival date.

From 2005 to 2006, a number of states were audited by the Department of Education's inspector general after allegations of fraudulent qualifications arose. The Department determined that many states were applying very loose interpretations to the eligibility requirements, and federal definitions for eligibility were made stricter (Education Weekly, 2007). While some programs were accused of fraudulent activity, the problem was mostly attributed to a general lack of training on what constitutes a migrant or a qualifying move, rather than fraud. Students that were found to be ineligible were removed from local programs, and programs were defunded for the students that did not qualify. Migrant student funding was removed from programs with high numbers of errors, such as Maine's and Oklahoma's, and these funds were reallocated to states and programs with fewer number of errors, such as Texas. Following the audit, workers were required to clearly state that they were seeking agriculture work as primary income, and states were required to implement a re-interview process in which external reviewers repeated eligibility interviews on an annual basis.

As a result of this policy upheaval, large numbers of migrant students lost eligibility. In perhaps one of the most extreme cases, 3 school districts in Oklahoma were externally audited by a team of reviewers. Of the 124 students that were re-interviewed, 121, or 98% of students were deemed ineligible (Zehr, 2006). In a summary of the significant decline in Education Week, it was reported that the number of eligible migrant students nationwide, following the implemented quality control measures, had "declined from a peak of 889,000 in the 2002-03 school year to 635,000 in the 2005-06 school year (Zehr, 2007)". This decrease has left a lasting effect on the functionality of Migrant Education Programs nationwide. Kentucky's enrollment was no

exception. Figure 1 shows the decline of qualifying arrivals of migrant students in Kentucky, with a sharp decline following 2003. Enrollment numbers have increased since 2012, but they have not recovered following the changes in enrollment policy.



Decline in tobacco and labor involvement in Kentucky

Tobacco was Kentucky's largest crop for the majority of the 20th century (Strupp, 2014). This is partly a result of the Agricultural Adjustment Act of 1938, which guaranteed that tobacco prices would exceed production costs if acreage quotas were observed (Pushkarskaya and Vedenov, 2009). Tobacco is a very labor intensive crop, and although it is seasonal, there are multiple phases and activities in growth that extend in Kentucky from March to December that have different labor requirements (see Figure 2). As a result, families had historically moved from county to county seeking work on different tobacco farms as a way to fulfill this labor need.

Families who traveled to Kentucky to do tobacco work qualified for the Migrant Education Program, and in-state migrants constituted the largest percentage of migrant families in the program since its authorization in 1965.

| | |
|---------------------------|--|
| March-April | Soil is prepared for planting. Seeds are sown in tobacco beds and stored in green houses on floating beds for plant to grow. |
| May-July | Plants are removed from floating beds and planted in soil (set in soil) |
| July-August | Tobacco flower is cut. Plants in August are cut and dried, and then moved to tobacco barns. |
| September-December | Tobacco is removed from the fields and placed in barns to dry |
| November-February | Leaves are stripped from plant and put in bulk to be brought to a distributor |

Figure 2: Tobacco Timeline

Tobacco production in Kentucky began its major decline after the passage of the Fair and Equitable Tobacco Reform Act, although general tobacco use had seen a decline due to heightened awareness of health risks (Huntrods, 2012). Although the bill was passed as a way to help the tobacco economy, it removed acreage requirements and offered no promises for price regulations, so smaller farm operations began to sell their tobacco farms and lease out crops to larger farms that have a more consistent labor pool. A decreased demand for tobacco led to lower prices, which forced most owners of smaller tobacco crops to find a replacement crop. Other crops have taken its place, but none are as labor intensive as tobacco.

The H2A Program

The H-2 Program is a temporary guest worker program that was formed as a response to the scarcity of labor in certain economic sectors. Following a shortage of labor during World War II, the United States instituted the Bracero program, which was an agreement with the Mexican government to send over laborers to work in agriculture. This evolved into the H-2 program, which was included in the Immigration and Nationality Act of 1954, and allowed for type of foreign labor to make up for a lack of domestic labor. This program was then divided in 1986 into the H-2A program, which focused primarily on agricultural work, and H-2B, which included any other type of work.

H2A agricultural workers are typically of Hispanic origin, and are here on a temporary visa. Kentucky is one of the largest users of the H-2A program currently, as farmers are looking to avoid the legal difficulties of employing undocumented laborers as well as have a consistent, reliable labor pool throughout the year. The rise in H-2A workers, coupled with a general decrease in acreage for smaller farms, has reduced the labor demand for transitory migrant farmworkers. Large farms can employ teams of H-2A workers that stay for 8-10 months and engage in a variety of agricultural labor, provided that there is evidence that the labor could not be acquired locally.

Research Design

The Migrant Education Program has transformed considerably since 2000. Following the tobacco buyout, the restrictive measures put in place in 2003 and in subsequent years, and the rise of the H2A program in Kentucky, the way that students were enrolled in the program changed considerably. In 2000, a student was generally much more likely to qualify for the

Migrant Program, as the interpretation of a qualifying activity was much more loose and undefined. The more restrictive guidelines were an attempt to allocate funds only to students who fit the federal description of migrant. Migrant students who have qualified post policy change should theoretically be much more likely to be facing the difficulties that migrant students typically face. For my research question, I wanted to know whether enrollment in the migrant program followed predictive patterns based on local labor demands for local agriculture following the policy changes, or if other factors, like the tobacco buyout, the increased use of the H2A program, or general fluctuations in population, influenced enrollment in a way that was significant.

Before the policy changes and re-interviewing process were interviewed, migrant students were often qualified using loose interpretations of federal guidelines. My hypothesis is that, following the policy changes and the introduction of biannual re-interviews, tobacco, hay, and cattle (crops by which migrant students could potentially qualify) should have a positive effect on Migrant Education Program Enrollment, and that enrollment should fluctuate based on local agricultural demand. I also predicted that, on a county level, tobacco would have the largest effect, and cattle and hay would have a lesser, but still significant impact. If this is the case, it would show that the quality control measures that were instituted in the early '00s as a result of fraud have allowed for a greater number of “true” migrant laborers to qualify. I further hypothesized that the presence of H2A workers in an area would cause a decrease in enrollment, as H2A workers can only be requested if there is a demand for migrant labor but no local labor pool.

The dependent variable is the number of migrant farmworkers who complete a qualifying move into a listed county in a given year. The variable is listed as **qadcount**, with QAD

representing the qualifying arrival date of a migrant family, and count representing the number of migrant children who qualified in specific Kentucky county in a given year. A migrant or seasonal laborer can qualify if the move was made with the intention of seeking agricultural labor. I acquired the QAD Count from the Kentucky Department of Education (Title 1 Part C). I also acquired, as a control measure, county level population estimates by year, to include any growth or loss that could be explained by simple population growth or loss.

| TABLE 2- DESCRIPTIVE STATISTICS FOR VARIABLES USED | | | | | |
|---|-------------|-------------|------------------|------------|------------|
| Variable | Obs. | Mean | Std. Dev. | Min | Max |
| | | | | | |
| Number of Qualifying Moves (qadcount) | 347 | 18 | 20 | 0 | 110 |
| Tobacco in Acres (areatobacco) | 347 | 1189 | 887 | 100 | 4840 |
| Hay Harvested in Acres (hayinacres) | 347 | 19377 | 11511 | 590 | 66200 |
| Number of Cattle (cattle) | 347 | 27476 | 17177 | 3400 | 91000 |
| Number of H2A Workers (numberofH2aworkers) | 347 | 84 | 136 | 0 | 796 |
| | | | | | |
| Population (population) | 347 | 31431 | 41949 | 2197 | 310797 |

Of the crops grown in Kentucky, tobacco is the most labor intensive and therefore is the most common qualifying activity for Migrant Education Program participants, but work on any farm in which raw products are handled qualify a migrant family or individual for participation in the program, provided that a move is completed within the last 3 years to seek that labor. I used crop acreage data for the main qualifying agricultural activities in Kentucky that could potentially qualify a migrant family, principally tobacco (measured in reported acres by year), but also hay (measured in acreage as variable **hayinacres**) and cattle (measured by county-wide count as **cattle**). That data regarding acreage growth and loss was acquired from the United States Department of Agriculture National Agricultural Statistics Service. I included crop

information in my regression from 2008-2014, to include all pertinent data and to reflect the resulted change from the re-interviews and more restrictive enrollment. I also used a fixed effect model for population estimates by county, to measure if growth or decrease in population had an effect on qualifying moves.

In order to include H2A workers as an independent variable, I created a new data set using requisitions that had been processed by the Department of Labor. Data from the Department of Labor Foreign Labor Certification Data Center has been available publically since 2008. I acquired separate spreadsheets that listed all individual H2A requests from 2008-2015 from the entire United States. I combined all Kentucky data into a single data set and collapsed each individual requisition into their respective counties by year. As the more restrictive qualification changes in migrant enrollment policy occurred in the mid-'00s, I start my panel data in 2008 so that I could have an accurate reflection of migrant farmworkers who qualified on actual moves seeking agriculture, instead of including those that may not have been as accurate.

Results and Analysis

| VARIABLES | gadcount |
|-------------------------------|----------------------|
| Tobacco Area (in 1000 acre) | 6.129*** (2.160) |
| Hay Area (in 1000 acre) | 0.0335 (0.111) |
| Cattle (in 1000 cattle heads) | 0.0507 (0.0972) |
| H2A Workers | -0.0198 (0.0151) |
| Population (in 1000) | 0.285*** (0.0232) |
| 2008 | 0.449 (0.771) |
| 2009 | 1.428 (-3.760) |
| 2010 | -1.430 (-0.047) |
| 2011 | 0.449 (0.771) |
| 2012 | 1.428 (-3.760) |
| 2013 | -1.430 (-0.047) |
| 2014 | 0.449 (0.771) |
| Constant | / |
| | / |
| Observations | 347 |
| Number of countyansi | 70 |

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

In order to measure effect of local factors on program enrollment, I ran a panel data regression with a fixed effect on counties over time. The observation size was small when compared to the number of counties in Kentucky. My model has a dummy variable that reports

whether or not a county has historically qualified migrant students, because certain areas that are reported in my panel data have, for a variety of reasons, never had a Migrant Education program. In the data set, counties that have not reported numbers for migrant students since 2008 were listed in the data with missing values rather than 0s for the 7 years included in the regression analysis, and therefore omitted from the analysis. I also included a fixed effect by year to measure if there were any unusual events in Kentucky agriculture overall that would account for a major change in number of enrollees.

Because of the large sizes of certain independent variables, I divided them by 1000 so that the statistical effect can be more easily observed. The results mostly followed the predicted outcome for my hypothesis, although certain variables are much lower than expected. For tobacco area, the result of 6.129 qualifying moves per 1000 acres indicates a predictable correlation between program enrollment and tobacco acreage. While other crops have historically qualified migrant families due to the less restrictive enrollment practices, tobacco has become the major qualifying crop, and the results show that they have the greatest effect by a large margin.

The other variables, hay and cattle, show a positive, but much smaller correlation with qualifying moves. There are several reasons why I included both hay and cattle, although they show signs of collinearity. I included both because they are separate activities by which a migrant family can qualify, and the Migrant Education Program (especially following the policy change) has a limited number of qualifying activities for migrant families and individuals. Migrant families throughout the state can and have qualified for these agricultural activities, but both are less labor intensive crops than tobacco, and so the qualifying moves happen at a lower rate among hay and cattle. Also, many of the migrant recruiters focus on recruiting in tobacco

fields and farms, and may not focus as heavily on cattle or hay farms. The coefficients were less than I expected, but still had a positive correlational effect, although not significant. The year fixed effect showed little statistical significance.

H2A workers reported a negative, but statistically insignificant effect. The negative effect was expected as well, as H2A visas are requested when there is a proven absence of local or nonlocal labor in the area, but I expected this to be a more significant factor, as the H2A program has grown over the last several years. Regardless, the negative effect that H2A workers have on program participation was predicted in the hypothesis, and was confirmed, but on a smaller scale than expected.

Conclusion

The Migrant Education Program in Kentucky has considerably decreased in size and has had to alter its delivery of services, but it still is appropriated approximately \$7 million dollars per year. Certain programs like those in Fayette County and Bourbon County have reduced in number, but still administer services to over 100 migrant students within their respective districts. The program, despite its financial limitations, continues to serve the current migrant population in Kentucky, and has sought to adapt to demographic shifts by hiring Spanish speaking staff and catering to the needs of the new migrant population

The results of the regression that indicate positive correlations with local agricultural landscapes, combined with the decrease in enrollment following 2003, show that while there are less migrant students currently enrolled in the program, there is a greater chance that they fit the federal definition with more accuracy, and thus are in greater need of support. The limited enrollment practices have allowed for the Migrant Program to recruit those who truly should

qualify as migrant, and the practice of re-interviewing has allowed for there to be quality control measures to ensure that the enrollment is more predictive and based around local factors like labor demand and agricultural presence. Although this means the programs are generally smaller, and has resulted in a number of programs closing down in Kentucky, it has also allowed for more prudent allocation of state funds to programs that have a greater need for migrant students.

A policy recommendation about Kentucky agriculture would be to consider a replacement crop for tobacco. Tobacco has historically provided seasonal laborers a source of income throughout the peak seasons of harvest, but due to significant acreage loss in many Kentucky counties, tobacco has been replaced by other less lucrative crops. Migrant families still live in these counties, but due to the lack of labor during different seasons, they lose income and are forced to relocate. A multi-seasonal crop like hemp would allow for nonlocal laborers during peak seasons to be employed and would limit the need to search for agricultural work elsewhere.

The future of the Migrant Education Program is tied directly with future trends in fields outside of the realm of education, such as agriculture and politics. Advances in agricultural technology, changes in immigration and labor laws, and a number of other things make the future of the Migrant Program both statewide and nationwide uncertain. The introduction of a labor intensive crop like hemp could increase the demand for agricultural laborers, increasing the possibilities for enrollment in the Migrant Education Program if those services are required. Regardless of size and funding levels, the Migrant Education Program will need to continue to be flexible and ready to adapt to any changes that could occur in the coming years.

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